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NEW SPECIES AND VARIETIES OF SPHENOPHORUS WITH NOTES ON CERTAIN OTHER FORMS.

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The present paper includes descriptions of several distinctly new species and a larger number of variants, some of the latter so different from the typical species to which they are related that without a large series of specimens, it is difficult to indicate correctly their taxonomic status. The availability of considerable material has enabled a better understanding than could possibly have been obtained from a smaller series. While some of these variants are varieties only, there is indication that certain others may prove to be subspecies or geographical races. In most instances, in a good series for study, the variants here discussed are easily separable from specimens typical of the species.

Since the publication of the writer's five earlier papers on *Sphenophorus*, considerable knowledge has been obtained in regard to the distribution of the species of the genus and some of the outstanding forms are here mentioned mainly from the standpoint of geographical distribution.

Sphenophorus schwarzii, new species.

(Pl. 5, fig. 1.)

Form slender, nearly three times as long as wide, opaque black with porcelain-like gray natural covering on elytra and most of lower surface, including legs. Rostrum slender, seven-tenths the length of the prothorax; feebly arcuate in apical three-fourths, not constricted behind scrobes, extreme apex slightly produced posteriorly. Prothorax one-fourth longer than wide, moderately arcuate anteriorly, widest near middle; disc flat, opaque black; middle vitta a fine slightly elevated line extending from apex to base; lateral vittae polished black, narrow, of nearly uniform width, strongly elevated, extending from near apex nearly to base and enclosing with side margins, an elongate, flat, strongly declivous, oblong black area. Elytra one-fourth wider than prothorax, sides subparallel in basal half; scutellum subtriangular, sulcate at center; striae deep, closely, somewhat coarsely punctate. Intervals alternately finely, somewhat coarsely and closely punctulate. Pygidium gray-coated, sparsely variosely punctate, much finer about margins. Prosternum with large shallow black disc-like punctures, confluent and sinuous. Meso- and metasternum and nearly entire abdomen densely covered with long golden-yellow hairs. First and second ventral segments slightly concave with thin impressed median line,

surface confluently coarsely punctate; fifth segment less coarsely and less closely punctate, punctures bearing long hairs. Legs long, femora and tibiae densely fimbriate with similar long yellow hairs. Third joint of tarsi strongly explanate forming a rounded brush as wide as long, spongy pubescent beneath.

Length, 12 mm.; width, 4.2 mm.; length of rostrum, ♂ 3.6 mm.

Fortress Monroe, Va., May 29, 1891, collected by Dr. E. A. Schwarz in whose honor the species is named.

Type ♂.—Cat. No. 26,900 U. S. National Museum. One specimen.

Not closely related to any known form but is allied to the *aequalis* group, because of the nature of the external coating and tarsal structure, the brush of the extremely wide third tarsal joint being widely separated medially. It differs noticeably in the slender nearly straight rostrum, flat pronotum with declivous sides and strongly villous lower surface and strongly fimbriate legs. This beautiful species is so distinct from all others of the genus known to the writer as nearly to warrant the erection of a new genus for its reception.

AEQUALIS GROUP.

The following synopsis of the species and principal varieties is submitted:

Elytral striae moderately wide, with deep, rounded punctures.
  Thoracic vittae indicated
    Dorsal surface moderately punctate, nearly uniform, pale ocher, gray or pale bluish, E. U. S. to N. Dak. ..... *aequalis*
    Dorsal surface with black median line, Wash. ..... var. *univitta* n. var.
  Thoracic vittae distinctly elevated
    Dorsal surface more strongly punctate, pale brown, Tex ..... var. *scirpi* n. var.
Elytral striae narrower, with punctures less rounded
  Elytral strial punctures large and deep
    Dorsal surface entirely black, Cal. ..... *discolor*
Elytral strial punctures small and shallow; thoracic vittae black, elytra gray, Ut., Cal., Wash. ..... *ochreus*
Elytral striae very narrow, with punctures scarcely visible on disc.
  Dorsal surface black, with abraded or subobsolete interspaces and alternate intervals partially gray, Cal. ..... *pictus*

Sphenophorus aequalis univitta, new variety.

Dark, greasy-appearing gray, vertex, anterior face of femora largely, coxae, trochanters and middle of abdomen, shining black. Middle prothoracic vitta black in basal half, separated from lateral by large punctures. Scutellum black. Elytral striae coarsely and very closely punctate on disc. Anterior femora feebly, middle strongly villous.

Length: 12–16.5 mm.; width, 4.8–6.8 mm.; length of rostrum ♀ 3.5–4.5 mm.

Sprague, Wash., May 8, 1921 (M. L. Lane); Grand Coulee, Wash., July 8, 1902 (C. V. Piper).

Type ♀.—Cat. No. 26,899, U. S. National Museum.

Sphenophorus aequalis scirpi, new variety.

Dull yellow brown on dorsal surface, paler brown to dull ocherous on sides and ventral surface; entire surface more strongly and densely punctate than in typical *aequalis*, especially noticeable on prothoracic interspaces, where some punctures tend to coalesce. Prothoracic vittae narrow, distinctly elevated, darker brown. Elytral strial punctures, very closely set, intervals finely punctate rather than punctulate as in other forms of this group.

♂—Ventral concavity somewhat shallow, strongly villous; last ventral segment also strongly villous.

♀—Similar to *aequalis*.

Victoria Co., Traylors Lake, Tex. (J. D. Mitchell); McPherson, Kans. (J. K. McMillan).

Type ♀.—Cat. No. 26,908, U. S. National Museum.

Reared from corn and collected on *Scirpus* sp.

Sphenophorus aequalis Gyll.

Aberration *a*—differs from the above in having very wide prothoracic vittae, which vary from dark brown to subopaque black.

Cameron Parish, La., May 10, 1919. Collected on corn.

Sphenophorus ochreus Leconte.

Sphenophorus ochreus Leconte, Proc. Acad. Sci. Phila., 1858, p. 941; Chittenden, Proc. Ent. Soc., Wash., v. VII, p. 182, 1905.

In the writer's note on this species only Utah and Mexico were given as localities. It occurs at Salt Lake City and Provo, Utah; Volga, So. Dak.; Vallecito, Amedee, Cal., July 21, 4,200 ft. (Wickham); Paha, Wash., June 9 (M. L. Lane); Saskatoon, Saskatchewan (H. J. Atkinson).

Sphenophorus ochreus atrivittata, new variety.

Elytral intervals 1, 3, 5, 7 and lateral all subopaque black, 2, 4, 6, and sublateral white, each with a single row of shallow, round, black punctules. Striae with small fusiform punctures, somewhat remotely placed. Ventral surface not villous. Sexual characters about as in normal *ochreus*.

The coloration imparts a strikingly black and white striped appearance. It is the most attractive Sphenophorus known to the writer, but is merely a color variant, as proved by a transitional individual and the apparent lack of definite specific structural characters.

Length, 14 mm.; width, 5.7 mm.; length of rostrum, ♂, 3.5 mm.

Utah (Coll. C. H. Roberts).

Type ♂.—Cat. No. 26,901 U. S. National Museum.

Sphenophorus peninsularis nasutus, new variety.

Similar to typical *peninsularis*, differing chiefly as follows: Robust, nearly half as long as wide, with much less alutaceous natural coating. Rostrum ♀ only ¾ as long as prothorax, subequally dilated except at base, not suddenly recurved at apex. Prothorax nearly as wide as long; vittae wide, especially lateral, which have pronounced branch reaching base of prothorax; interspaces narrow, coarsely punctate. Elytra with distinct subapical callosity; intervals 1, 3, 5 and 8 elevated, 2 and 4 slightly so. Lower surface and sides below disc of thorax and elytra moderately shiny black, with little coating.

Length, 12.5–14.5 mm.; width, 5.8–6 mm.; length of rostrum ♀, 2.5–3.5 mm.

New York and vicinity (Wm. Juelich, Chas. Schaeffer); Mt. Pleasant, N. J. (E. G. Smyth).

Type ♀.—Cat. No. 26,907 U. S. National Museum.

The male is unknown. This variant evidently occupies a similar position in regard to the typical species as variety *intervallatus* to *setiger*.

Sphenophorus setiger intervallatus, new variety.

This name is proposed for an interesting series in which the first five elytral intervals are long, wide and subequally elevated, imparting to the variant an appearance very similar to that of *ludovicianus*. It is even darker than that species. The abdominal brush of setae and other normal characters are present in the male, and the absence of other apparent structural differences between this and typical *setiger* are indicative of varietal rank only.

Anglesea, N. J., July and August; Plymouth, Woods Hole, Mass.; Texas; New York and vicinity.

Type ♀.—Cat. No. 26,909 U. S. National Museum.

Sphenophorus laevigatus Chittenden.

Sphenophorus laevigatus Chittenden, Proc. Ent. Soc. Wash., v. VII, p. 58, 1905.

Comparison of a specimen from Winnipeg, Manitoba, collected by Professor Wickham, with the original description and type of this species from Utah shows no characters of separation. The same is true of two specimens labeled respectively "L. I." and "N. Y. City & vcty." The probabilities are that the last mentioned specimens are improperly labeled.

Sphenophorus robustus rectistriatus, new variety.

Prothoracic interspaces and elytra with fine profuse pumbeous alutaceous coating. Elytral striae fine, thin, but quite distinct, straight, with very small, regularly somewhat distantly placed rounded punctures. Intervals nearly flat, subequal in width, third feebly elevated at extreme base.

Length, 12.0–13.5 mm.; width, 4.8–5.5 mm.; length of rostrum ♀, 4–4.5mm.

New Buffalo, Mich., June, 1920 (M. H. Hatch); Indiana (J. B. Smith). Two females.

Type ♀.—Cat. No. 26,908 U. S. National Museum.

As there are all possible intergradations of this form and individuals with the extreme scarcely punctate elytra of *robustus*, it is evidently a variety only of that exceedingly variable species as regards elytral sculpture.

Sphenophorus blatchleyi, new species.

Body a little more than three-tenths as wide as long; opaque black, surface with very little dark alutaceous coating. Head obsoletely punctulate. Rostrum (♀) about two-thirds as long as prothorax, feebly nearly uniformly arcuate, very little compressed at base, not at all at apex; base feebly widened with subparallel sides, not protuberant; interocular puncture minute but distinct, surface of rostrum finely punctate and punctulate. Prothorax distinctly longer than wide, vittae similar to *zeae*, interspaces rugosely, less densely punctate. Elytra very little wider than prothorax; striae thin, irregular, with very large, irregular, mostly rugosely excavate, closely-placed punctures; intervals very narrow and very irregular bi- and uniseriately punctulate. Ventral surface coarsely variolately punctate, scarcely finer on apical end of middle of first abdominal segment. Tarsi subequal in width, third tarsal joint of the anterior legs little wider than the other two.

Length, 9.0 mm.; width, 3.3 mm.; length rostrum ♀, 2.2 mm.

Ormond, Fla., April 3, 1911 (W. S. Blatchley), one female. *Type* ♀.—Cat. No. 26894 U. S. National Museum.

Named in honor of Prof. W. S. Blatchley. Similar in general appearance to *zeae* Walsh, from which it differs markedly in the structure of the rostrum, in particular in the lack of the basal protuberance, the much coarser and shallower elytral punctures, the more densely punctate lower surface and the narrower third joint of the anterior tarsi.

Sphenophorus serratipes, new species.

(Pl. 6, fig. 4.)

Dorsal surface similar to *ulkei*, more slender, about three-eighths as wide as long, black, subopaque on dorsum, moderately shining on ventral surface; antennae mostly, tarsi entirely piceous. Rostrum two-thirds as long as prothorax, nearly straight, somewhat widely and uniformly compressed, moderately dilated at base, not strongly over scrobes; surface somewhat coarsely, densely punctate, at base more strongly and densely, not canaliculate and without impressed line, interocular depression feebly defined. Prothorax ♂ about three-fifths as wide as long, sides subparallel, apical constriction strong, surface nearly uniformly deeply densely punctate without apical fossa but with a narrow median smooth line, each side of which are two slight depressions in basal third. Scutellum sulcate at middle. Elytra one-fourth wider than prothorax; striae fine, much interrupted by large shallow foveae; intervals alternate in convexity, sutural and third subcarinate, biseriately, remainder uniseriately punctulate. First and second abdominal segments somewhat deeply, sparsely punctate; third and fourth short, finely remotely punctate; fifth deeply closely punctate at middle.

Tibiae strongly, more or less irregularly serrate on inner face, neither tibiae nor tarsi fimbriate. Third joint tarsi scarcely wider (⅓–¼) than first in all pairs.

♂—Pygidium subtruncate at apex. Ventral concavity moderately wide and somewhat shallow.

♀—Pygidium normal, feebly concave each side.

Length, 8.4 mm.; width, 3.0 mm.; length of rostrum, 2.2 mm.

Fort Collins, Colo., May 22, 1898 (Wickham); Medicine Hat, Alberta, Can. (F. S. Carr).

Type ♂.—Cat. No. 26,896 U. S. National Museum; paratypes also in the National collection at Ottawa, Canada; and in the collection of L. L. Buchanan.

The roughly serrate inner margin of the tibiae is evidently peculiar to this species, and this character, together with the long nearly straight equally compressed rostrum distinguish it from all others described from North America. It is closely related to *ulkei*, evidently replacing that species in the extreme North.

Sphenophorus cicatristriatus Fåhraeus.

Sphenophorus cicatristriatus Fåhraeus, *In* Schönh. Gen. Curc. v. IV, p. 958, 1837.
Spenophorus cicatripennis Fåhr. op. cit. v. VIII, 2, p. 262; Chevrolat, Ann. Soc. Ent. Fr. 1885, pp. 110, 111; Champion, Biol. Cent. Amer., Coleoptera, v. IV, pt. 7, p. 159, 1910.

Among a series of specimens submitted to Mr. G. C. Champion, both this species and *ulkei* were returned with the statement that they were identical. Three of these specimens indicate readily by the habitus that they are distinct from the latter. *S. cicatripennis*, according to Champion, was based upon examples with "a comparatively smooth prothorax, fewer foveae on the elytra, and the depressions of the surface 'pulverulent.'"

The prothorax, with the exception of the medio-scutellar portion which is deeply punctate and not divided as in *ulkei*, has the appearance of having been smoothed by artificial means, or by rubbing consequent to age, and the strial punctures are smaller, regularly and uniformly horse-shoe-shaped and more distantly placed on the disk in the basal portion. The prothorax is also longer with subparallel sides, and with distinct but small foveae in the medio-basal region, and there is one additional character which absolutely separates this species from *ulkei*. The head and rostrum are very feebly punctate, whereas in *ulkei* there are well defined, closely placed punctures. The third joint of the anterior tarsi is fully twice as wide as the second joint, whereas in *ulkei* the third joint is scarcely one-third wider than the second.

Specimens examined by Mr. Champion and the writer are from the State of Mexico, Mex. The writer also has examined

specimens from Atzcapotzaico, Mex., collected by Mr. E. G. Smyth, which are entirely lacking the pulverulence discussed by Fahreaeus, the entire surface being polished black.

Sphenophorus jugosus, new species.

(Pl. 6, fig. 1.)

Slender, black, opaque on dorsal surface, feebly shining on ventral, with portions of antennae, tarsi and apices of elytra piceous; no visible natural coating.

Rostrum ♀ four-fifths as long as prothorax, slender, moderately arcuate and compressed from apical fourth gradually stronger to apex; base and apex about equally compressed; base moderately protuberant, moderately dilated, sides subparallel, subvariolately punctate in basal half, more coarsely at base and on vertex of head. Prothorax (without apical constriction) not longer than wide, feebly bisinuate at base, somewhat indistinctly vittate, median vitta indicated by an irregular longitudinal area, broadest near middle, extending from apex, where elevated as on disc, a little beyond middle; lateral vittae represented by broad areas extending from base to beyond middle, these three areas scarcely elevated with few very small punctures; interspaces with few large coarse shallow variolate punctures, smaller at sides and still smaller apically. Scutellum short, triangular, deeply concave at base. Elytral surface uneven, with 7 strong transverse elevated ridges each side of third interval; striae fine, interrupted by moderate-sized deep irregularly rounded punctures; intervals feebly and remotely punctulate; 1 narrower than 2; 3 nearly as wide as 1 and 2 together, elevated and shining near middle; 5 slightly elevated. Apical tubercles prominent, humeri not prominent. Pygidium densely deeply punctate, convex, vestiture sparse, pale yellow with small apical tufts. Ventral surface sparsely coarsely punctate, punctures shallow, foveate on metasternum; first and second abdominal segment (♀) separated by well defined sutural line. Femora slender, with somewhat coarse shallow punctures. Tibiae slender, straight on outer face, obliquely truncate; anterior with outer face rounded and apical spur as long as width of tibiae, acute. Third joint of anterior tarsi little wider than second.

Length: 7.5 mm.; width, 2.8 mm.; length of rostrum ♀ 2.0 mm.

Type ♀.—Cat. No. 26,892 U. S. National Museum.

This species appears to be most nearly related to *destructor* and *callosus*, but has a longer and more slender rostrum, more slender femora and tibiae, has no natural coating and different punctation.

Sphenophorus incongruus elephantulus, new variety.

More robust throughout than typical *incongruus*, black, moderately shiny with pale gray alutaceous coating between and at sides of prothoracic vittae and on alternate intervals. Rostrum $\frac{5}{7}$ as long as prothorax, somewhat robust Prothorax only $\frac{1}{7}$ longer than wide, arcuate at sides; vittae wide; interspaces coarsely subvariolately punctate. Legs somewhat stouter than typical.

Length, 10 mm.; width, 3.5 mm.; length of rostrum ♀, 2.5 mm.

Western Kansas (E. A. Popenoe). A donation from Mr. C. H. Popenoe.

Type ♀.—Cat. No. 26,905 U. S. National Museum.

Sphenophorus robustior costifer, new variety. .

Body more slender than in typical *robustior*, more than two-fifths as long as wide. Prothorax shorter, as wide as long; vittae polished black, nearly covering the disc; interspaces very narrow, alutaceous. Elytra feebly alutaceous; intervals 1, 3, and 5 strongly elevated, shining. The existence of one individual intermediate between the variety type and typical *robustior* indicates that this form is not entitled to specific rank.

Length, 11.2 mm.; width, 4.3 mm.; length of rostrum ♀, 3.0 mm.

South Dakota (J. M. Aldrich); Lake Okoboji, Ia., June 21, 1917 (L. L. Buchanan).

Type ♀.—Cat. No. 26,895, U. S. National Museum.

Sphenophorus sublaevis Chittenden.

(Pl. 5, fig. 2.)

Sphenophorus sublaevis Chittenden, L. c., p. 176.

In Blatchley and Leng's Rhynchophora (p. 568) *sublaevis* is assigned as a variety of *callosus*. The differences are shown by the accompanying illustrations of both species and of *destructor*. Indeed, this form is intermediate between *callosus* and *destructor* and more nearly related to the latter. In the series which has been studied, the elytra are always strongly transversely and irregularly rugose. The ground color is black with a strong tendency to smoothness. One individual has certain portions of the dorsum shining black. *S. callosus* is always dull opaque.

This species is somewhat more northern in distribution than *destructor* but specimens of both have been seen from regions not far remote from each other.

Sphenophorus venatus Say.

Sphenophorus vestitus Chttn., Proc. Ent. Soc. Wash., v. VI, 1904, p. 134.

Additional experience in the study of the genus since the description of this species was made, together with the accession of a series of two specimens from Tappahannock, Va., July 20, 1916 (H. Fox) and one from Smith Island, Va., the last from the stomach of a toad, has convinced the writer that *vestitus* is simply a smooth gray-coated variation of *venatus*, not entitled even to a varietal name. Similar instances of smooth-coated specimens, in some cases, at least, newly developed, are not rare in the genus and are especially exemplified by *callosus* and *cariosus*.

Sphenophorus holosericus, new species.

(Pl. 6, fig. 2.)

Body ♀ robust, about two and one-eighth times as long as wide; opaque velvety black, inner surface of femora, knees, and tibiae shining black; no natural coating. Rostrum ♀ a little less than three-fourths as long as prothorax, strongly compressed, strongly protuberant over scrobes, moderately very irregularly arcuate; base deeply irregularly confluently punctate; interocular puncture small, deep, without impressed line, succeeding punctation arranged in somewhat irregular rows, gradually finer toward apex; feebly arcuate, nearly straight in middle half, strongly reflexed posteriorly at apical fifth, where it is widened about as over scrobes, outer face of apex strongly concave, inner face acutely produced at extreme apex. Prothorax about one-fourth wider than long, somewhat feebly convex on disk, surface deeply punctate at apex, densely at sides, more sparsely elsewhere, punctures confluent at sides of a thin smooth median area, and near base. Scutellum small, about twice as long as wide, nearly flat, declivous at extreme base. Elytra short, about four-fifths as wide as long, deeply narrowly striate, irregularly somewhat coarsely and sparsely punctate, punctures very distantly set; intervals subequal in width; third much wider, scarcely elevated, bi- and triseriately punctulate basally, others uniseriately. Ventral surface sparsely, somewhat finely and not deeply punctate. Legs finely and distinctly punctate. Anterior and posterior femora glabrous, middle pair slightly villous on inner surface. Tibiae slender, somewhat strongly angular on inner surface above middle, feebly serrate and villous; outer angle sinuous, at apex slightly produced, inner angle with a strong acute spur, and a shorter subapical spur, about one-fourth as long as apical one. All tarsi narrow, subequal in width.

♂—More slender than ♀. Ventral concavity shallow. Pygidium very small strongly rounded near apex.

♀—Rostrum slightly longer and more strongly compressed. Third elytral interval slightly widest, biseriately punctulate near base. Pygidium small, distinctly arcuate at apex, surface deeply sparsely punctate.

Length ♂, 7.0–8.5 mm.; width, 2.4–4.0 mm. Length ♀, 7.5 mm.; width, 3.0 mm. Length rostrum ♀, 2.6–2.8 mm.; of ♂, 1.8–2.2 mm.

Willis, Tex. (J. C. Bridwell); Columbus, Tex., June 25 (Hubbard and Schwarz); Victoria, Tex. (W. E. Hinds); Longview, Tex.; Arizona (H. K. Morrison).

Type ♀.—Cat. No. 26,893 U. S. National Museum.

This species bears no especial resemblance to any other in our fauna. The rostrum recalls that of *zeae*, is more coarsely punctate at base, while in the latter the median carina is lacking. The thoracic and elytral sculpture is peculiar, similar to *arizonensis*, in which, however, the punctures are smaller and rounded, and *deficiens* where they are partially oval and in part rounded, but more closely placed in rows. The type is larger, more robust and shows the specific characters much more clearly than the remainder, which are apparently dwarfed, especially the

males. In two males examined there is a finely impressed line below, but not continuous with, the interocular puncture.

Sphenophorus reticulatus, new species.

Form similar to *ulkei*, opaque dull black. Prothora more coarsely punctate, elytral sculpture finer, anterior tibiae obliquely truncate. Rostrum ♀ a little more compressed on apical third. Prothorax with a distinct median carina over half as long as prothorax, each side of which in basal half is a moderately deep, long fossa; surface more deeply, coarsely and densely reticulately punctate, without smoother spaces in usual location of lateral vittae, punctures confluent in submedian fossae and at sides posteriorly. Scutellum flat or slightly concave, feebly shining. Elytra finely striate, striae interrupted by much shallower contiguous and confluent foveae; intervals extremely narrow, scarcely wider than lines, subequal in width, 3, 5 and 7 more prominent, narrowly costate or subcostate, first or sutural and third biseriately, others uniseriately punctulate. Ventral surface more coarsely punctate than in *ulkei*, and more densely on last segment. All tibiae obliquely truncate, not visibly produced exteriorly.

♂—Metasternum deeply and narrowly concave through middle, concavity twice as long as wide and very coarsely punctate.

♀—Metasternum moderately and narrowly concave, less coarsely punctate

Length, 9–10 mm.; width, 3.6–4.0 mm.; length ♂ and ♀ rostrum 2.0 mm.

Arizona, 1 ♂, 1 ♀.

Type ♀.—Cat. No. 26,897 U. S. National Museum.

In the male specimen the prominent intervals are much more narrowly costate, an individual, not a sexual, difference.

Sphenophorus bartramiae, new species.

(Pl. 6, Fig. 3.)

Black; surface except eyes, apical portion of rostrum and antennae, almost completely covered with a thick yellow-brown more or less natural felt-like coating to which argillaceous material adheres obscuring the punctation, striae and sculpture. Rostrum ♀ short, thick, one-fourth as long as prothorax moderately arcuate, narrower in middle third, dilated at apex. Prothorax subquadrate, wider than elytra except at base of latter, nearly as wide apically as at base, location of vittae and foveae faintly indicated, punctation fine and sparse. A minute median subapical callosity and a similar lateral sub-basal one, near basal angle of prothorax. Elytra strongly acuminate posteriorly forming an isosceles triangle; intervals subequal in width and height, finely uniseriately punctate. Lower surface finely and sparsely punctate. Legs and other characters not mentioned, similar to *minimus*.

♂—Pygidium wider and subtruncate at apex; first two ventral segments very feebly concave at middle.

♀—Pygidium narrow and rounded at apex with fine hairs; first two ventral segments subconnate.

Length, 6.5–8 mm.; width 2.8–3.2 mm. Length of rostrum ♀, 2 mm.; of ♂ 1.6 mm.

Victoria, Tex., March 28, 1907 (W. J. McAtee). Specimens taken from the crop of *Bartramia longicauda*, the upland plover.[1]

Type ♀.—Cat. No. 26,904 U. S. National Museum.

This species, while quite distinct, bears some resemblance to the related *minimus* but is much larger. The superficial characters alone separate it readily from any described form. In some individuals the elytra bear a subapical callosity on a distinct tubercle. In only one specimen examined is the character of the elytral punctation visible. Considerable individual variation is apparent even in a small series from a single locality. In most specimens the location of the striae is indicated by a few fine short jet black lines.

Sphenophorus necydaloides Fabricius.

Calandra necydaloides Fabricius, Systema Eleutheratorum, vol. VII, p. 435, No. 29, 1801; Olivier, Histoire Naturelle des Insectes, Paris, 1807, vol. V, No. 83, p. 94, Pl. 28, fig. 420.

Sphenophorus retusus Gyllenhal, Schoenherr, Gen. et Spec. Curculionidum v. IV, p. 949, 1837, Horn, Proc. Amer. Philos. Soc., 1873, pp. 427, 428.

The original description of Fabricius is briefly as follows:

"Statura omnino C. abbreviatae, at distincta et alia. Caput atrum, nitidum, rostro incurvo. Thorax niger, obscurus, vix punctatus. Elytra abdomine breviora, striato-punctata."

Olivier's description is in substance:

"Obscure black with a tendency to cinereous; thorax feebly punctate with the middle smooth. Elytra little shorter than the abdomen; striae feebly punctate."

The length of the species (*S. abbreviatus*) with which it is compared, and the hair-line of Olivier's figure is between 9 and 10 mm., the locality "Carolina." The original description is as recognizable as that of *melanocephalus*, and Olivier's interpretation of the latter with the accompanying figure is generally accepted. The illustration furnished by Olivier of *necydaloides*, together with his description, size, and locality, leave little doubt that that species is the same as *retusus* Gyll.

Sphenophorus chittendeni Blatchley.

Sphenophorus chittendeni Blatchley, Rhynch. N. E. Am., 1916, p. 565.

A specimen from Eaugallie, Fla., January 8, 1910, from the

[1]It is of interest that the upland plover feeds upon Sphenophorus to a considerable extent, the list of species including *germari*, *oblitus*, *compressirostris*, *costipennis*, *parvulus*, *venatus*, and several other weevils, some injurious.

stomach of *Sturnella granella*, also a specimen reported by Mr. L. L. Buchanan from Quitman, Ga., in stomach of a toad.

Sphenophorus oblitus Leconte.

Sphenophorus oblitus Lec., *in* Leconte & Horn, Rhynch. Am. No. of Mex., Proc. Am. Phil. Soc., v. XV, 1876, p. 425.

Widely distributed in Texas; also Shreveport, La., Montgomery, Ala. (H. Soltau); Duncan, Okla. (T. D. Urbahns); Rocky Ford, Colo. (H. O. Marsh); Rooks Co., Kansas; Arizona (H. K. Morrison).

Reported to be injurious to rice.

Sphenophorus tardus Fall.

Sphenophorus tardus Fall, Cal. Acad. Sci., v. VIII, 1901, p. 269, 270.

A single specimen from Willcox, Ariz., collected by Dr. A. K. Fisher. Previously known only from California.

Sphenophorus germari pinguis, new variety.

Similar to typical *germari*, shorter, more robust, twice as long as wide; elytra short, little longer and scarcely wider than prothorax. Dorsal surface opaque with many depressions and other inequalities, striae of elytra deeper, especially toward the apex where the punctures become more elongate and smaller. Anterior tibiae moderately angulate below the middle, nearer the apex than in *germari*.

Length, 8.0 mm.; width, 4.0 mm.; length of rostrum, 2.2 mm.

Tampa, Fla., April 15 (Hubbard and Schwarz).

Type ♂.—Cat. No. 26,906 U. S. National Museum.

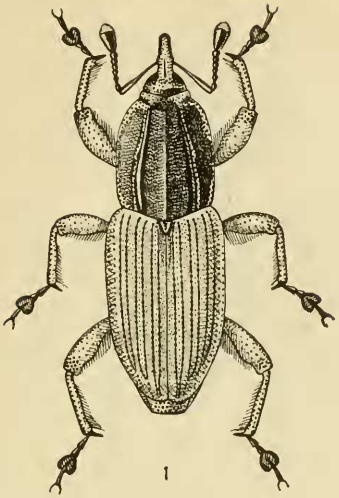
This may prove a distinct species, the last character alone being significant together with the habitus and the other characters mentioned. A larger series is desirable to establish or disprove this.

Sphenophorus compressirostris obscuripennis, new variety.

A digression from the common type is deserving mention, and there is indication that it merits recognition as a race. The principal distinguishing characters of normal *compressirostris*[1] are as follows:

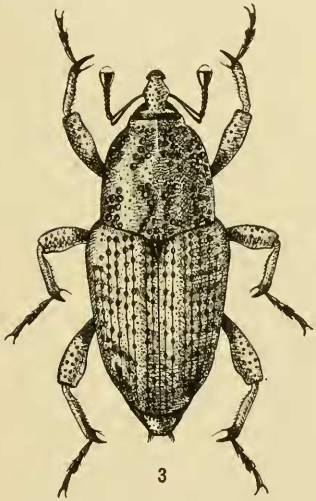
Thorax opaque with vittae moderately distinct or indicated and moderately shining. Elytral intervals strongly alternately convex, alutaceous and usually more or less coated with argillaceous material, sculpture and punctation more or less obscure—Tex., Kans.

[1]Jour. Acad. Sci., 1823, p. 319; Lec. ed. v. I, p. 20; Horn, Proc. Am. Phil. Soc. 1873, p. 429.



Sphenophorus schwarzii

Sphenophorus sublaevis



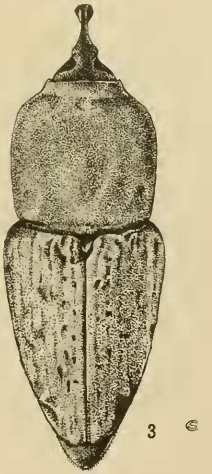
Sphenophorus callosus

Sphenophorus destructor

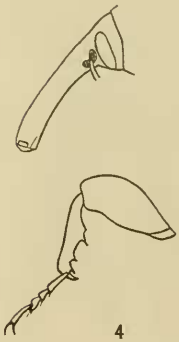
CHITTENDEN—NEW SPHENOPHORUS

Sphenophorus jugosus

Sphenophorus holosericus



Sphenophorus bartramiae



Sphenophorus serratipes

CHITTENDEN—NEW SPHENOPHORUS

Variety *obscuripennis* differs mainly as follows:

Thorax largely shining black on disc, sparsely punctulate except at sides and each side of median line near base. Elytral sculpture almost obscured by thick gray coating, intervals feebly indicated. Tooth of anterior tibiae very strongly developed.

Texas: Edinburg (Coll. Chttn.), Beeville and Sharpsburg (Hubb. & Sz.) Brownsville (Wickham), Koehler, N. Mex. (E. R. Kalmback).

Type ♀.—Cat. No. 26,903, U. S. National Museum; paratype Canadian National Collection.

The habitat of *obscuripennis* is extreme southern Texas and doubtless extends into Mexico.

Few specimens of typical *compressirostris* have been seen with no argillaceous coating, something that is to be noticed, however, in other species, e. g., *cariosus*.

Explanation of Plate 5.

Fig. 1, *Sphenophorus schwarzii*
Fig. 2, *Sphenophorus sublaevis*
Fig. 3, *Sphenophorus callosus*
Fig. 4, *Sphenophorus destructor*

Explanation of Plate 6.

Fig. 1, *Sphenophorus jugosus*
Fig. 2, *Sphenophorus holosericus*
Fig. 3, *Sphenophorus bartramiae*
Fig. 4, *Sphenophorus serratipes:* Rostrum and anterior tibia.

NEW BETHYLID AND SERPHOID PARASITES FROM NORTH AMERICA. (HYMENOPTERA.)

By Robert M. Fouts.

This paper contains descriptions of eleven new species and one new genus of Hymenoptera belonging to the families Bethylidae, Scelionidae, Calliceratidae and Diapriidae.

All measurements recorded were made with a Bausch and Lomb binocular microscope, 24 mm. objective, No. 5 ocular and a micrometer disc ruled to five mm. in .05 mm. divisions. Each division equals .0111 mm.

I take as the width of the thorax the length of a line drawn from the outside edge of one tegula to the outside edge of the other. In computing the height of the thorax an imaginary line is drawn from the middle of the mesonotum above to that part of the sternum just in front of the middle coxae below. When speaking of the length of the head I mean its greatest length, not back to the foramen magnum but to the apices of